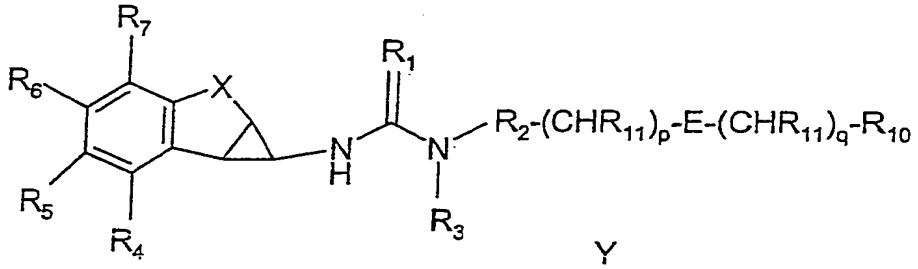
Claims

1. A compound of the formula Y:



Y

where;

R_1 is O, S;

R_2 is a nitrogen-containing heterocycle, wherein a nitrogen is located at the 2 position relative to the (thio)urea bond;

R_3 is H, C_1-C_3 alkyl,

R_4-R_7 are independently selected from H, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, haloC_1-C_6 alkyl, C_1-C_6 alkanoyl, haloC_1-C_6 alkanoyl, C_1-C_6 alkoxy, haloC_1-C_6 alkoxy, C_1-C_6 alkyloxy-C_1-C_6 alkyl, haloC_1-C_6 alkyloxyC_1-C_6 alkyl, hydroxyC_1-C_6 alkyl, aminoC_1-C_6 alkyl, carboxyC_1-C_6 alkyl, cyanoC_1-C_6 alkyl, amino, carboxy, carbamoyl, cyano, halo, hydroxy, keto;

X is $-(CR_8R_8')_n$-D-$(CR_8R_8')_m$-;

D is a bond, $-NR_9$-, –O-, -S-, -S(=O)- or $-S(=O)_2$-;

n and m are independently 0, 1 or 2, provided that they are not both 0 when D is a bond;

R_8 and R_8' are independently H, C_1-C_3 alkyl, haloC_1-C_3alkyl, hydroxy, or R_8 and R_8' together with their adjacent C atom is –C(=O)-

R_9 is independently H, C_1-C_3 alkyl;

E is $-CH_2$-, -CHOH-, -C(=O)-, $-NR_9$-, –O-, -S-, $-S(=O)_2$-;

p and q are independently 0, 1 or 2, where $p+q \leq 2$;

R_{10} is an optionally substituted, saturated or unsaturated 5-7 membered carbocyclic ring or an optionally substituted, saturated or unsaturated 5-7 membered heterocyclic ring containing 1 to 3 hetero atoms selected from O, N and S;

R_{11} is independently H, C_1-C_3 alkyl, haloC_1-C_3alkyl, hydroxy

with the proviso that $-(CHR_{11})_p$-E-$(CHR_{11})_q$-R_{10} is not unsubstituted phenoxy;

and pharmaceutically acceptable salts and prodrugs thereof.

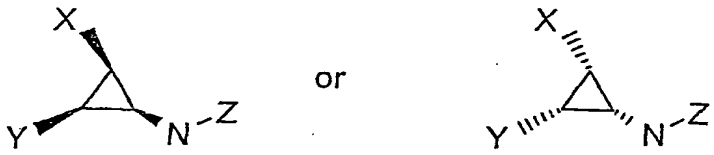
2. A compound according to claim 1, wherein R_1 is O.

3. A compound according to claim 1, wherein R_2 is pyridyl, isoxazolyl, benzothiazolyl, pyrimidinyl, pyrazinyl or thiazolyl.

4. A compound according to claim 3, wherein R_2 is pyrid-2-yl, substituted at the 5 position with the $-(CHR_{11})_p$-E-$CHR_{11})_qR_{10}$ moiety.

5. A compound according to claim 1, wherein R_3 is H.

6. A compound according to claim 1, wherein the cyclopropyl moiety has an enantiomeric excess of the conformation depicted in the partial formulae:



where X is as defined, Y is the bridge to the (substituted) phenyl ring depicted in formula I and Z is bond to the (thio)urea-R_2-$(CHR_{11})_p$-E-$(CHR_{11})_q$-R_{10} moiety depicted in formula I.

7. A compound according to claim 1 wherein the compound of formula I compises an enantiomeric excess of the isomer showing negative optical activity.

8. A compound according to claim 1, wherein D is –O-

9. A compound according to claim 8, wherein n is 0 and m is 1.

10. A compound according to claim 1, wherein R_4 is hydrogen, fluoro or hydroxy.

12. A compound according to claim 1, wherein R_5 is hydrogen, fluoro, C_{1-3} alkylcarbonyl or C_{1-3}alkyloxy.

13. A compound according to claim 1, wherein R_6 is hydrogen, halo, C_1-C_3alkyloxy, C_{1-3}alkylcarbonyl, cyano or ethynyl.

14. A compound according to claim 13 wherein R_6 is hydrogen, methoxy or fluoro.

15. A compound according to claim 1 wherein R_7 is hydrogen, halo, C_{1-3}alkyloxy, or C_{1-3}alkylcarbonyl.

16. A compound according to claim 15, wherein R_7 is fluoro.

17. A compound according to claim 1, wherein R_5 and R_6 are H and R_4 and R_7 are fluoro.

18. A compound according to claim 17, wherein X is $-OCH_2$, R_1 is O, R_2 is pyrid-2-yl and R_3 is H.

19. A compound according to claim 1, wherein $-(CHR_{11})_p$-E-$(CHR_{11})_q$ is –O- or –S-

20. A compound according to claim 1, wherein $-(CHR_{11})_p$-E-$(CHR_{11})_q$ is -CHOH-.

21. A compound according to claim 1, wherein $-(CHR_{11})_p$-E-$(CHR_{11})_q$ is -O-methylene or –O-ethylene.

22. A compound according to claim 21 wherein R_{10} is N-morpholino.

23. A compound according to claim 1, wherein R_{10} is optionally substituted cycloalkyl, cycloalkenyl, phenyl, pyridyl, isoxazolyl, furyl, pyrimidyl, pyrazinyl, thiazolyl, imidazolyl, indolyl, triazolyl, piperidinyl, piperazinyl, or morpholinyl.

24. A compound according to claim 23, wherein R_{10} is halophenyl or cyanophenyl.

25. A compound according to claim 24, wherein R_{10} is fluorophenyl or fluorocyanophenyl.

26. A compound according to claim 23, wherein R_{10} is pyrid-3-yl or pyrid-4-yl.

27. A compound according to claim 26, wherein R_{10} is cyano or fluoro substituted pyrid-3-yl or pyrid-4-yl.

28. A pharmaceutical composition comprising a compound as defined in any preceding claim and a pharmaceutically acceptable vehicle or diluent therefor.

29. A composition according to claim 28, further comprising 1 to 3 additional HIV antivirals.

30. Use of a compound as defined in any of claims 1-27 in the manufacture of a medicament for the prophylaxis or treatment of HIV-1 infections.

31. Use according to claim 30, wherein the HIV-1 infection is a drug escape mutant.

32. Use according to claim 31, wherein the drug escape mutant comprises the K103I mutation.